

**Program of the 20th Symposium on Coordinated Observations of the Ionosphere
and the Magnetosphere in the Polar Regions held at the National
Institute of Polar Research, Tokyo,
November 19–20, 1996**

Mesosphere, thermosphere, and ionosphere

- 1-01 PMSE observations (EISCAT/ALOMAR-SOUSY) and a possible observation of PMSE in the Antarctic. T. SUGIYAMA, S. FUKAO, R. FUJII and T. OGAWA.
- 1-02 Simultaneously observed atmospheric wave by sodium lidars and the MU radar. T. KAWAHARA, K. KOBAYASHI, T. KITAHARA, F. KOBAYASHI, Y. SAITO, A. NOMURA, T. NAKAMURA, T. TSUDA, M. ABO and C. NAGASAWA.
- 1-03 MF radar observations at Davis station, Antarctica. M. TSUTSUMI and R. A. VINCENT.
- 1-04 Determination of the mean ionospheric height in the observation of total electron content, and detection of TID. Y. OHTA, T. MARUYAMA, T. OKUZAWA, K. OHTAKA, A. MORIOKA and H. KATO.
- 1-05 Derivation and display of ionospheric equivalent current system in the Polar region. T. IYEMORI, M. TAKEDA, T. KAMEI, M. NOSE and A. SAITO.
- 1-06 Ionospheric tomography by using improved MTSVD method. M. KUNITAKE, T. MARUYAMA, M. NAGAYAMA, K. OHTAKA, H. ISHIBASHI, H. OYA and H. KATO.
- 1-07 Auroral photoemission rate of the first negative band system of N_2^+ as λ 427.8 nm observed by the sounding rocket and its simulation using measured electron differential number flux. II. K. ONDA, H. MIYAOKA, Y. ITIKAWA and M. EJIRI.

Experiment and simulation

- 1-08 Reflection of the electromagnetic R. F Gaussian Pulse by ionosphere. K. MOTOJIMA, H. SAKURAI and S. KOZAKI.
- 1-09 Quasi-steady production of region 1 and region 2 field-aligned currents. T. YAMAMOTO and S. INOUE.
- 1-10 Computer experiments of generation mechanism of auroral double layers. T. MIYAKE, Y. OMURA and H. MATSUMOTO.
- 1-11 Visualizations of the trajectories of auroral particle precipitation. S. MINAMI, Y. SUZUKI and M. EJIRI.

SuperDARN and EISCAT radar

- 1-12 Deployment of Syowa and SuperDARN radars. N. SATO, H. YAMAGISHI A. S. YUKIMATU and M. WATANABE.
- 1-13 SuperDARN 2 radars operation at Syowa - Development of softwares for 2 radars operation - . A. S. YUKIMATU, M. WATANABE, H. YAMAGISHI, N. SATO and R. BARNES.
- 1-14 Current status on the EISCAT ESR/KST radar systems, the schedules of Japanese special programme experiments, and the data analyses of common programme data. R. FUJII.
- 1-15 Movement of Polar Patches and auroral blobs revealed with Antarctic HF radars. T. OGAWA, N. NISHITANI, M. PINNOCK, N. SATO, H. YAMAGISHI and A. S. YUKIMATU.
- 1-16 Equatorward plasma flow burst near the plasma sheet boundary layer -----Nightside "throat". M. WATANABE, A. S. YUKIMATU, H. YAMAGISHI and N. SATO.
- 1-17 E-region ionization over the EISCAT due to partial ring current protons during a substorm. T. KIKUCHI, D. S. EVANS, K. SCHLEGEL and H. LÜHR.
- 1-18 A polar electric field associated with a substorm observed with the HF radar and the IMAGE magnetometer chain. T. KIKUCHI, M. WATANABE, A. S. YUKIMATU, H. YAMAGISHI, N. SATO and H. LÜHR.

- 1-19 Preliminary results with the scanning twin array beam VHF auroral radar at Syowa Station (STARS). K. IGARASHI K. OHTAKA, M. KUNITAKE and T. KIKUCHI.

Polar cusp and polar cap

- 1-20 Coexistence of polar cap arcs with patches. T. OBARA, T. MUKAI and K. FUKUI.
- 1-21 Cusp/cleft aurora observed at Zhonshan Station, Antarctica. K. MAKITA, K. KIKUCHI, N. SATO, M. AYUKAWA, X. WANG, H. YANG and R. LIU.
- 1-22 Dayside CNA events in the polar cusp/cleft associated with geomagnetic disturbances. M. NISHINO, H. OTA, Y. YAMAGISHI, P. STAUNING, J. A. HOLTER and T. HANSEN.
- 1-23 All sky imager observation of aurora and airglow at South Pole: System design and the initial test results. M. EJIRI, S. OKANO, M. OKADA, M. TAGUCHI and S. TAKESHITA.

Aurora

- 2-01 Intensity correction in projection of all-sky auroral image onto geomagnetic coordinates. H. YANG, R. LIU and N. SATO.
- 2-02 Tomographic reconstruction analyses for the ALIS-JAPAN auroral monochromatic images. T. ASO, A. URASHIMA, A. FUJITA, M. EJIRI, H. MIYAOKA, Å. STEEN, U. BRÄNDSTRÖM and B. GUSTAVSSON.
- 2-03 High-resolution imaging of a flickering aurora. H. MIYAOKA, M. OKADA, K. MAKITA, N. SATO and M. EJIRI.
- 2-04 Simultaneous observation of pulsating aurora with LF wave. H. TAKIZAWA, A. MORIOKA, H. MISAWA, Y. TAKAHASHI, H. MIYAOKA and N. SATO.
- 2-05 Pi2 and auroral breakup. K. OKADA, O. SAKA and O. WATANABE.

Electromagnetic waves

- 2-06 Penetration of polar electric fields into the equatorial region: A result from the 210° MM project. K. YUMOTO, H. TACHIARA, Y. TANAKA, M. SHINOHARA, T.-I. KITAMURA, K. SHIOKAWA, R. J. MORRIS, J. V. OLSON, S.-I. AKASOFU and the 210° MM magnetic observation group.
- 2-07 Particle acceleration mechanisms deduced from CNA pulsations associated with Pc5 pulsations. M. NOSE, T. IYEMORI, A. S. YUKIMATU, M. SUGIURA and J. A. SLAVIN.
- 2-08 Computer simulations of a VLF emission with Gaussian-shaped particle code. Y. ONO, H. UEDA and S. SHIMAKURA.
- 2-09 Wave energy distributions of ELF hiss emissions in wavenumber space. S. SHIMAKURA, T. KABURAKI, N. SATO and A. J. SMITH.
- 2-10 Dynamics of wave energy distribution of ELF hiss. T. KABURAKI, S. SHIMAKURA and A. J. SMITH.
- 2-11 Analyzing system of the magnetospheric ELF/VLF waves. T. KABURAKI, H. UEDA and S. SHIMAKURA.

Solar wind and magnetosphere

- 2-12 Convection and entrance of thermal He^{++} from the solar wind. S. WATANABE, E. SAGAWA, I. IWAMOTO, B. A. WHALEN, A. W. YAU, T. MUKAI and H. HAYAKAWA.
- 2-13 The enhancements of directional differential energy flux of energetic ions associated with a storm: comparison of observational results by Explorer 45 with particle simulations. Y. EBIHARA, H. MIYAOKA and M. EJIRI.
- 2-14 Large amplitude electromagnetic fluctuations in the inner plasma sheet region observed by the Akebono Satellite. T. NAGATSUMA, H. FUKUNISHI, H. HAYAKAWA and T. MUKAI.
- 2-15 Ionospheric closure of the substorm current wedge system deduced from the observation with the visible auroral imager Aboard AKEBONO. A. KADOKURA, M. EJIRI and T. OGUTI.
- 2-16 Statistical nature of magnetic storms. N. YOKOYAMA and Y. KAMIDE.
- 2-17 11-year solar cycle dependence of total ozone content over Syowa, Antarctica. T. WATANABE.
- 2-18 Effects of solar wind parameters on geomagnetic activity. T. ONDOH.

- 2-19 Structure and dynamics of the magnetospheres of Comets, the Earth, and the Sun as inferred from Comet observations. T. SAITO, Y. MORI, M. YASUE and S. NUMAZAWA.

Geomagnetic conjugate observations

- 2-20 Conjugate auroral observation with the imaging riometer and all sky camera at Poker Flat, Alaska. Y. MURAYAMA, M. ISHII, H. MORI, S. KAINUMA, K. IGARASHI, H. YAMAGISHI, M. NISHINO, H. C. STENBAEK-NIELSEN and T. HALLINAN.
- 2-21 Large-scale bursty flow observed in the northern and southern hemispheres. N. NISHITANI, T. OGAWA, N. SATO, H. YAMAGISHI, A. S. YUKIMATU and M. WATANABE.
- 2-22 Drifting diffuse CNA (DDC) event observed by Syowa-Iceland conjugate imaging riometers. Y. FUJITA, H. YAMAGISHI and N. SATO.
- 2-23 Conjugacy of discrete aurora. K. HASHIMOTO and N. SATO.
- 2-24 Conjugacy of pulsating aurora. N. SATO, M. MOROOKA and H. MINATOYA.
- 2-25 Observation of high energy cosmic-rays by means of Polar Patrol Balloon (PPB). T. SHIBATA, H. NANJO, S. KURAMATA and T. YAMAGAMI.